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（71）出願人(米国を除く全ての指定国について): 株式会社村田製作所 (MURATA MANUFACTURING CO., LTD.) [JP/JP]; 〒6178555 京都府長岡市東神足1丁目10番1号 Kyoto (JP).

（72）発明者; および

（75）発明者/出願人(米国についてのみ): 細谷達也 (HOSOTANI, Tatsuya) [JP/JP]; 〒6178555 京都府長岡市東神足1丁目10番1号 株式会社村田製作所内 Kyoto (JP). 竹村博 (TAKEMURA, Hiroshi) [JP/JP]; 〒6178555 京都府長岡市東神足1丁目10番1号 株式会社村田製作所内 Kyoto (JP).

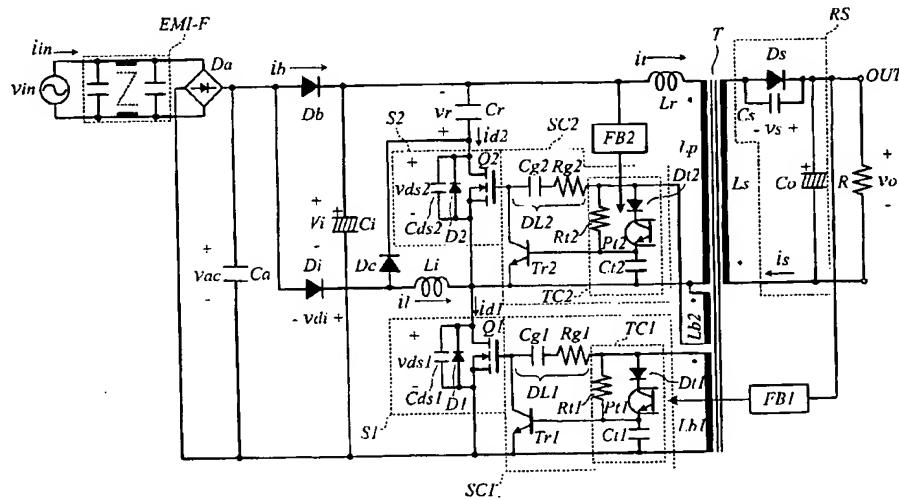
（74）代理人: 小森久夫 (KOMORI, Hisao); 〒5400011 大阪府大阪市中央区農人橋1丁目4番34号 Osaka (JP).

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（54）Title: SWITCHING POWER SUPPLY

（54）発明の名称: スイッチング電源装置



（57）Abstract: A switching power supply comprising first and second switch circuits (S1, S2) composed of switch elements (Q1, Q2), diodes (D1, D2) and capacitors (Cds1, Cds2), and a transformer (T). A first inductor (Lr) is connected in series with the primary winding (Lp) of the transformer (T). A second inductor (Li) is provided such that the voltage of a third capacitor (Ca) is applied during the on period of the first switch circuit (S1). A diode (Di) for blocking the reverse current of the second inductor (Li), and a capacitor (Ci) charged by the exciting energy stored in the second inductor (Li) to apply a voltage to the primary winding (Lp) a capacitor (Cr) charged by the exciting energy stored in the second inductor (Li) to apply a voltage to the primary winding (Lp) during the on period of the first switch circuit (S1) are also provided. Furthermore, a capacitor (Cr) is provided to form a closed loop together with the inductor (Lr), the primary winding (Lp) and the second switching circuit (S2).

（57）要約: スイッチ素子 (Q1), (Q2)、ダイオード (D1), (D2)、キャパシタ (Cds1), (Cds2) からなる第1・第2のスイッチ回路 (S1), (S2) と、トランス (T) を備え、トランス (T) の1次巻線 (Lp) に直列に第1のインダクタ (Lr) を接続し、第1のスイッチ回路 (S1) のオン期間に第3の

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ABSTRACT

A switching power supply apparatus includes first and second switch circuits (S1) and (S2) composed of switch devices (Q1) and (Q2), diodes (D1) and (D2), and capacitors (Cds1) and (Cds2), and a transformer (T). A first inductor (Lr) is connected in series with a primary winding (Lp) of the transformer (T), and a second inductor (Li) is provided so that a voltage of a third capacitor (Ca) is applied during an on-period of the first switch circuit (S1). A diode (Di) preventing a reverse current from flowing in the second inductor (Li), and a capacitor (Ci) that is charged by excitation energy stored in the second inductor (Li) and that applies a voltage to the primary winding (Lp) during the on-period of the first switch circuit (S1) are further provided. A capacitor (Cr) is further provided so as to form a closed loop together with the inductor (Lr), the primary winding (Lp), and the second switch circuit (S2).